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Population Trends and Education in the Southeast

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EDUCATION today is inevitably caught in the currents of the great society. It is, to be sure—and it should remain—one of the strongholds of local initiative; it depends upon the intelligence and imagination of local teachers and administrators, adapting teaching to local needs and problems. It must, nevertheless, now and forever recognize and adjust to the larger trends of our complex, interdependent world.

OUR HUMAN RESOURCES

Among the most important of these trends are those of population, our human resources. They are especially important because education has a prime responsibility for developing and liberating human energies, abilities, and aspirations. In these few pages some of these trends are summarized from Rupert B. Vance's *All These People* and their implications for education suggested.[1]

The population of a given area is, of course, the people of that area. The first and obvious population fact is the number of people in the area: thus in 1940 the U. S. had 131,669,000 people, the world had more than two billion. Population is a living, changing thing: in 1650 the world had about 545 million people, the continent of North America about one million. The growth, or decrease, of a population is due to the excess of births over deaths, or vice versa. This is called the natural increase. Population size is also affected, of course, by migration.

The components of population growth or decline are birth rates and death rates. The crude birth rate is simply the number of live births in a given population during one year, per 1000 persons. Crude death rates are calculated the same way. To get a true picture of population trends, however, it is necessary to get more refined rates of births and deaths, which are not affected by such factors as the age composition of the population.

[1] Rupert B. Vance, *All These People* (Chapel Hill: University of North Carolina Press, 1945).

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Any population is complex. It is composed of two sexes, many age groups, many nationalities and races, many occupational groups, rural and urban groups, regional variations of many kinds, married and unmarried people, many religions, people of different education. It is easy to see that composition is important in determing population trends—the number of women of child-bearing age, for example, will obviously affect the number of children born and thus the natural increase. Furthermore, population is mobile —people move into, out of, and within a given area. This is called migration. They move in response to pulls which lead them to believe life will be better in some way in some other place, or in response to pushes which convince them that life is unsatisfactory where they are.

It is easy to see how important population trends are. Ponder, for example, the effect of a stable population in the United States upon our economy. This economy has been based upon an expanding market. Market expansion has in turn depended heavily upon population growth. Our economy must develop new, expanding markets to replace those formerly supplied by a rapidly growing population. This is but one example. Consider the effect of rapidly growing oriental populations and stable or declining occidental populations upon international relations.

EFFECTS ON SCHOOLING

Population trends affect school administration, finance, and curriculum. Enrollments are obviously affected by population size, its rate of increase or decrease, its age composition, and its mobility. Race, sex, occupational, and religious compositions of a population obviously affect administration and curriculum. When population trends are placed in their proper framework of resources and economic trends, we see them as basic forces affecting all of society and education in its role in society. The relation between resources and population affects an area's ability to support education. The ratio between men and land is important to the level of culture in the area. The effect of population upon national and world economics must sooner or later affect the remotest one-room school. World population trends affect international relations—whether diplomats know it or not. These trends will affect the form and function of schools. They should affect their curriculums now.

Let us look briefly at some of the main population trends of the Southeast and their implications for education.[2]

[2] Virginia, North Carolina, South Carolina, Florida, Georgia, Kentucky, Tennessee, Alabama, Mississippi, Arkansas and Louisiana. These 11 states constitute the Southeast as defined by Howard W. Odum, *Southern Regions of the United States* (Chapel Hill: University of North Carolina Press, 1936), pp. 5-11, 245-290.

PROBLEMS OF THE SOUTHEAST

The Southeast is in the position of contributing more children to the nation from its population than any other region and giving them the poorest education; of having the least with which to support education but often trying hardest to educate its children. It is a kind of selection process in reverse: each year population depletions are replaced by children with the least educational opportunity. In 1940 the Southeast had 21.5% of the nation's population, 11.5% of its wealth, and 17.4% of its land area. The Northeast, in contrast, had 30.4% of the population, 39.2% of the wealth, and 6.8% of the land area.

The Southeast is growing faster than the nation as a whole.

PERCENT OF POPULATION INCREASE

	United States	*Southeast*
1920-30	16.1	12.0
1930-40	7.2	10.6

The Southeast gained 2.7 million people in 1920-30 and 2.7 million again in 1930-40. In 1920-30 this was 15.8% of the total increase for the nation; in 1930-40 this was over 30% of the national gain. This difference is due to higher birth rates in the Southeast. The fertility ratio (children under 5 per 1000 women 15-44) was about 400 in the Southeast in 1940, about 325 in the nation.

In the Southeast, children of elementary school age (5-14) made up 20.7% of the total population in 1940; in the nation 17%. In the Southeast youth (age 15-24) made up almost 20% of the total population in 1940; in the nation a little over 18%.

The heavier educational load of the Southeast is therefore easy to see. More of its population is of school age. Furthermore, it has a smaller proportion of its population in the productive age groups, 20-64, upon which the burden of support falls, than do the more industrialized regions.

Approximately one-half of the people twenty-five and over in the Southeast had completed 7.4 years of school; in the nation approximately one-half had completed 8.4 years. The Southeast was lowest in the nation in this respect. In 1935-36 approximately 91.7% of the nation's children 5-17 were enrolled in all schools; in the Southeast about 85%. By almost every other index of educational attainment and adequacy, the Southeast lags. Average value of school property was about $110 per pupil in the Southeast in 1938, in the nation $274. Average cost of education per pupil enrolled in public schools was $72.00 in 1938 in the nation, in the Southeast $33.00.

CLOSING THE GAP

Yet in 70 years, since 1870, the Southeast has made tremendous strides in closing the gap. One reason is that it has tried so hard. On the basis of proportion of the collected tax dollar which is spent for education, the Southeast's ratio of effort to support education is 93, the nation's 84, the Northeast's 73, the Northwest's 102.

Why the lag in the South? The Southeast in 1935-36 ranked lowest in financial ability to support education per unit of educational need. This reflects its ratio of population and wealth, cited above; it reflects its lowest per capita income of $317 (1940), compared to $546 in the nation. This, in turn, reflects the pressure of its growing population upon its resources in their present state of agricultural and industrial development.

We can see, therefore, that the primary implications of these population trends for education in the region is the impact of a young, growing population upon the ability to support education.

We should note the effect of a declining rate of population increase upon schools. The United States as a whole, and the Southeast, are slowing down in their rates of increase, due to dropping birth rates. Most experts see the United States population ceasing to grow, or even declining, between 1960 and 1980. A growing population has more young people than a stable or declining one. As our population quits growing so fast, it begins to age, and the number of children of school age decreases in proportion. This we already see in decreasing elementary enrollments. After the tremendous gains of previous decades, elementary enrollments began to decrease in the nation about 1930, in the Southeast about 1936.

HIGH SCHOOL ENROLLMENT

High school enrollment has shown continued increases. The decline in the birth rate has not yet been sufficiently reflected in the high school to offset the effects of attendance laws and other factors tending to increase enrollments. Already the rate of increase of high school enrollments has begun to decline, however. We may expect public school enrollments to decrease as our population assumes the age composition of a stable or declining population. There will be some empty buildings, perhaps, and some unemployed teachers, or there may be as many teachers, with smaller pupil loads; we may concentrate upon improving the quality of education. Differential fertility between the regions will probably con-

tinue for some time, leaving the Southeast with the problem described above—a larger proportion of children to educate. If urban migration continues, the effects of decreasing enrollments will appear first in rural schools.

It should be noted that the sharp rise in the birth rate during the war will be reflected in a wave of first grade enrollments a few years hence. Most experts, however, feel that the war-time rise in birth rates is temporary, and we will go back to the long-time trend toward a stable or declining population.

The rural and urban composition of a population affects administration, financing, and curriculum of education. Population density not only affects taxable wealth available for school support, but also administrative matters, epitomized in school consolidation. Urban areas almost always have more wealth to support schools, not to mention the economy of educating larger numbers of children who live in a small area. It is true, too, that progressive influences probably affect urban schools sooner. In 1940, 56.5% of the total United States population was urban; 32.1% of the Southeast's population was urban. The Southeast, however, has the third highest density of population among the six regions. Finally, the high fertility of the rural, and the low fertility of the urban areas must be remembered—more children per person able to support education is the rural picture. And rural America produces the future generations.

RACIAL COMPOSITION

Another population fact affecting education in the Southeast is, of course, racial composition. About 29% of the region's population was Negro in 1940. Negroes have had lower rates of natural increase than whites in the Southeast in every decade except 1930-1940. The economic and social waste of maintaining a bi-racial school system presents a serious regional problem.

Occupational distribution is another population factor of importance. In 1820 72.3% of the nation's people were employed in agriculture; in 1940, less than 25%. In the Southeast 36.5% were still employed in the extractive economy (agriculture, mining, forestry) in 1940. The Southeast has shown the same trends in occupational distribution as the nation but has followed twenty to thirty years behind the nation. While agriculture is still very important and makes great demands upon Southern education, the trend toward greater proportions employed in manufacturing, distributive, clerical, and service occupations will increase with the

industrialization of the South. The implications for vocational education are many.

MIGRATION

Another factor of great significance is migration. The Southeast has had comparatively little foreign immigration for many decades and its percentage of foreign-born persons is relatively low. Migration out of the region and rural-urban migration within the region, however, are very important to education in the Southeast. In the 1920's more than a million persons migrated from the Southeast to other regions. By 1930, 3,412,000 more persons who were still living had left the Southeast than had come into it. The dynamic has been the push of high fertility and the pull of greater economic opportunity elsewhere. The migration has favored females and persons in the younger productive ages. This means that the Southeast is training (or failing to train) many of the persons who stream to the industrial areas of the nation to help make up the industrial labor force. The usual pattern seems to be for southern emigrants, in competition with skilled workers in other regions, to pile up at the bottom of the occupational ladder in the unskilled, low-paying jobs. This is especially true of Negroes, who have migrated heavily to northern cities since World War I.

The rural districts of the Southeast have sent 2,900,000 of their natural increase to the cities of the region. This rural-urban migration within the region, as well as the migration out of the region, poses for Southern rural education the problem of preparing rural youth in the skills and understanding necessary for a satisfying urban life. Taken with the figures on inequality of ability to support education, it offers a clear and convincing argument for federal aid to equalize educational opportunity.

Curriculum Experimentation

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WHAT are the developing trends in curriculum change in our schools? Are we able to discern any emerging patterns of curriculum growth? Are patterns of curriculum revision desirable in a democracy? Or is it wiser for each state, each county, and each local community to proceed to improve its own curricular program at its own pace and in its own way to meet its own needs?

One fact emerges clearly from a study of the curricular changes in the schools within the last twenty-five years. That one fact is that the curricular program today in almost every school and in almost every school room shows a marked growth over the curricular program which was in operation in that same school a quarter century ago. There has been general acceptance of the concept of the curriculum as including all the experiences through which children and youth go under the supervision of the school. New areas or subjects of study have been added; new methods of teaching are being employed which meet the needs of the individual or the group better; or community and home life have been hooked up more closely to the work of the school; better educated teachers are in charge; pupil activities which formerly were considered without the province of the school, have been incorporated naturally into the curricular program; teachers and pupils, or teachers and administrators, or school and community personnel, plan cooperatively for the work of the school. One teacher of experience of twenty-seven years as elementary school teacher, secondary school teacher, supervisor, and administration phrased this marked curricular growth pretty well when he said: "When I first started to teach in the elementary school, I thought that my main job was to keep the kids from wiggling; now I feel that my main task is to turn each wiggle into some worthwhile study or activity."

Selection of Systems for Study

Perhaps a brief backward look at some of the evolving experimental programs that have been worked out over a period of years will help us to plan for those additional curricular changes that must come in the schools in this postwar period. Among programs for the improvement of the curriculum which have achieved nation-

al prominence since World War I are those which have taken place in such individual systems as the following: Winnetka; Dalton Plan; Parker District, South Carolina; Denver; Detroit; Los Angeles; St. Louis; Baltimore; Montgomery County, Maryland; Long Beach; Los Angeles County; Elkins Park; Pennsylvania; and Santa Barbara County. Programs for curriculum revision on a statewide scale are exemplified by Alabama, Georgia, Mississippi, Oregon, California, and Virginia. It is impossible in the scope of this paper to describe the trends in all these systems.[1] So from this group of representative programs for curriculum revision, four have been selected for their contributions on the following bases: (1) long continued improvement and growth; (2) development of new techniques; and (3) emphases of their programs at the present time. On these bases, four programs were selected; they give a limited sampling of various types of schools. Two state systems are examined, Alabama and Virginia; one urban school is included, Winnetka; and one county system, Santa Barbara, California.

Winnetka

This surburban system in Illinois is world famous, largely because of its long-continued and successful attempt at individual instruction in a public school.

Under the long term leadership of Carletion Washburne, Winnetka pioneered in individual instruction, in the "core" curriculum (which was composed of the "common" essentials) for all children, in "unit" work, in "self-testing" for individual pupils, and in the breaking down of grade levels or grade lines for scholastic work. This system also helped to lead the way in the provision of newer group activities and self-expression subjects.[2] Since 1919 Winnetka has continued to improve her offerings along these lines, and even today she is still centering her efforts on the individual student and his development.

Santa Barbara County, California

The program of curriculum development in Santa Barbara County was begun in the middle of the "Curriculum Revision Decade," 1930-1940; it is still in progress. The entire staff of the schools of the county took part in the program. In California no State course of study has been prepared for teachers; instead, each district, county, or city is encouraged to promulgate its own. In accordance with this philosophy, the teachers in Santa Barbara

[1] For a more detailed account of the "Stages of Growth in the Modern Curriculum Movement," the reader is referred to J. Minor Gwynn's *Curriculum Principles and Social Trends*, New York, The Macmillan Company, 1943, Chapter VI.

[2] E. P. Cubberly, *Public Education in the United States*, Boston, Houghton Mifflin Company, 1934 (Revised and Enlarged Edition) pp. 529; 518.

County were encouraged to develop their own educational plans and activities for their own classroom and school use. This statement from volume 6 of the Santa Barbara County curriculum series is typical of the approach to their study of their curriculum:

"It is hoped that these units of study will prove suggestive as to procedure, content and materials. They are not presented for copying by other teachers. *These statements should be thought of as reports of work done and not as Outlines of content to be taught.* Other teachers and pupil groups would possibly develop different problems, and the treatment of the same problems would doubtless take somewhat different form."[3]

The Santa Barbara program agrees upon nine basic functions of human living as the scope of the core curriculum for all grades:

1. Developing, Conserving, and Intelligently Utilizing Human Resources.
2. Developing, Conserving, and Intelligently Utilizing Non-Human Resources.
3. Producing, Distributing, and Consuming Goods and Services.
4. Communicating.
5. Transporting.
6. Recreating and Playing.
7. Expressing and Satisfying Spiritual and Aesthetic Needs.
8. Organizing and Governing.
9. Providing Education.

The sequence of intergrating themes for the school grades is set up as follows:

For Kindergarten through Grade III: Guiding the growth of children toward more effective living in their immediate and growing environment (Home, School, Neighborhood, Community).

For Grades Four and Five: Guidance toward more effective living in a changing world and understanding the world through mastering man's relationship to his physical environment, contrasting our control of environment with simpler adjustments used by peoples of simpler cultures.

For Grades Six through Eight: Guidance toward increasing effectiveness in carrying out the basic functions of human living through an adequate understanding and appreciation of scientific principles and methods, of the resulting increased possibilities of control and of resulting rapidity of change.

For Grades Nine and Ten: Planning for educational, vocational, personal, and social goals; understanding of relationships between the problems of the individual and those of the school, community, state, and nation.

For Grades Eleven and Twelve: Understanding of how man has met and is meeting his major problems—with emphasis upon solutions now being proposed and the historical foundations of our present problems.

For Grades Thirteen and Fourteen: Development in understanding of democratic ideals and their implications for social organization.

[3] *Santa Barbara County Teachers Develop Builders in Daily Democratic Living*, Vol. 6, Elementary, Santa Barbara, The Schauer Printing Studio, 1942, p. i.

The very titles of the curriculum series which has been published by the Santa Barbara County group (1940-1942) indicate the wide scope of their *community and regional approach* to curriculum improvements in their schools:

Vol. I: *County Units of Study for Teachers in Elementary Schools.*

Vol. II: *Curriculum Guide for Teachers in Elementary Schools.*

Vol. III: *Guide for Use of Community Resources.*

Vol. IV: *Curriculum Guide for Teachers in Secondary Schools.*

Vol. V: *Guide for Teachers of Children of Different Cultures.*

Vol. VI: *Teachers Develop Builders in Daily Democratic Living: Elementary.*

Vol. VII: *Program of Curriculum Development.*

The Virginia Program

Since 1931, the state of Virginia has been a pioneer in curriculum planning on a state-wide scale. It was in Virginia that H. L. Caswell and D. S. Campbell were first able to try out on a large scale their ideas about a curriculum which was to be adapted to the *major functions of social life, with centers of interest* for each year or grade of the school. The Virginia program in its development over the last fifteen years is a good illustration of the influence of various movements in education upon curriculum making on a large scale. In the beginning, Virginia spent much time and gave major emphasis to the *aims-and-objectives* stage. The next step was to fit these aims into a *core curriculum.* But a core curriculum without reasonably well defined *scope* and *sequence* too often might result in duplication of both activities and teaching materials on successive grade levels, and thus is an unreasonable waste of teaching time; so *centers of interest* were formulated for each grade. Throughout all revisions of the Virginia program for the improvement of instruction, the influence of the "activity movement" is discernible in the "general activities" for each grade or year in the earlier editions, and in the "Problems and Activities" sections of the 1943 course of study.[4]

The high school program in the early stages of growth of the Virginia program had a *core* consisting of (1) social studies, (2) language arts, (3) science, and (4) general mathematics; by 1942 this core had been enlarged to include two more areas, namely, physical and health education and fine and practical arts. These six areas had come to comprise what the Virginia group prefers to

[4] *Course of Study for Virginia Elementary Schools: Grades I-VII*, Richmond, *Bulletin, State Board of Education*, XXV No. 6 (May, 1943).

call "A Broad and Varied Program of General Education."[5] The elective fields for high school students now consist of Practical Arts, Fine Arts, and Academic Subjects.

Outstanding contributions of the Virginia Curriculum program have been the development of *centers of interest* for each grade level, the start toward "general education" through the core curriculum for all high school grades, and a general stimulation of interest in Virginians to continue to study and plan for a better school program. The two latest studies have been made by the Virginia State Chamber of Commerce on opportunities for the improvement of secondary education in Virginia, and by the Virginia Education Commission on the total public school structure.[6] Any program of curriculum improvement which results in two such significant investigations by competent people fifteen years after the start of the program has accomplished an outstanding piece of work.

Revision in Alabama

Alabama started her curriculum development program in 1935, and by late in 1941 she had issued Curriculum Bulletins Nos. 1-9. Like Virginia, Alabama has developed a core curriculum for her high schools; but her approach has been through the *large-unit* procedure. Their suggestions specifically state that the teacher may develop on her own almost any type of unit, whether the experience unit, the subject-matter unit with the experience approach, or the subject-matter unit with the subject-matter approach. Their core curriculum includes three aspects:

I. The Core Curriculum, or Basic Socializing Experiences.

II. The Pursuit of Special Interests.

III. Work in the Basic Skills and Techniques.

The Basic Socializing experiences, or areas of living with which every pupil should be familiar are home life, recreation (including creative interests), production and consumption, transportation and communication, and citizenship. In the junior high school grades, the subjects which are usually provided for in the core are English, social studies, art, music, general science, mathematics, physical education, health education, and recreational activities. In the senior high school the core is composed of English and social

[5] *Manual of Administration for the High Schools of Virginia, Bulletin, State Board of Education*, XXV, No. 2 (August, 1942), Chapter, Chapters II, IX.

[6] *Opportunities for the Improvement of High School Education in Virginia*, Report of the Committee on Education of the Virginia State Chamber of Commerce with Foreword and Recommendations, Richmond, Virginia State Chamber of Commerce, March, 1944, pp. 169: and *The Virginia Public School System, Report of the Virginia Education Commission*, Richmond, Commonwealth of Virginia, 1944, published in abbreviated form and with appendix to the complete document.

studies.[7] Scope and sequence have been cared for adequately in the entire program, and the freedom and responsibility for secondary schools in working out their own programs are stressed. For this purpose, two plans for organization of the curriculum of the high school have been offered, (1) The Core Curriculum, and (2) The Modified Subject Matter Organization. In the modified subject matter plan, the main difference between that and the old time subject matter organization seems to be that the program is arranged more by *groups* of subjects; these groups work to prevent extreme departmentalization.

In addition to the progress that has been made by the Alabama program in large-unit teaching, she has been as successful as Virginia in stirring up and stimulating public interest in her state schools. The 1943 Alabama legislature created the Alabama Educational Survey Commission and charged it with the duty of making a complete and detailed study of the state's public school system. This Commission entered into an agreement with the American Council on Education to make this study for them, with Maurice F. Seay of the University of Kentucky as Director. This report was finished and published in 1945, and marks another step forward in Alabama's continuing program of curriculum revision and improvement.[8]

Curriculum experimentation of the kind now under way in American schools and communities necessarily involves teacher education. Indeed, much of the curriculum development described in this article constitutes in itself in-service teacher education of a high order. The Sloan Foundation experiments in Kentucky and Florida illustrate the close connection between modern curriculum making and teacher preparation. Much of the recent work in improvement of teacher education has come about as a direct result of the need for a new kind of teacher education that considers curriculum experimentation to be active experiencing under the guidance of teachers who understand children and realize the need for building on individual and community needs.[9]

[7] For the earlier core curriculum see *Planning a Core Curriculum* in the Secondary School, Bulletin No. 7, 1939; for later modification, consult *Program of Studies and Guide to the Curriculum for Secondary Schools*, Bulletin No. 9, 1941; for Large-Unit teaching, see *Procedures in Large-Unit Teaching: Suggestions for Improving Instruction*, 1937.

[8] *Public Education in Alabama, A Report of the Alabama Educational Survey Commission*, Washington, The American Council on Education, 1945.

[9] See the reports of the Commission on Teacher Education of the American Council on Education, particularly the volumes on "In-Service Education of Teachers" and "Helping Teachers Understand Children."

Has Work Experience a Place in Secondary Education?*

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HIGH school enrollment, which went into a marked decline during the war, should begin to show signs of recovery in the not far distant future. A question of major importance is: What will the high schools do to increase their holding power so that they will not lose 50% of the students who enter high school as they did even before the war gave added impetus to school leaving?

An article in *The High School Journal* for November-December, 1943, "Secondary Education and the Post-War World," by Willard B. Spalding, challenged the secondary schools to get ready to meet their shortcomings. Mr. Spalding listed seven major criticisms of secondary education made during the past decade, all of which are significant and three of which have particular bearing on the holding power of the secondary schools. These three are:

1. Too large a part of the curriculum is intended to prepare persons for college, when but few attend college.

2. Little of the educational program deals with actual problems of the world which students will face when leaving school.

3. Work is the great common experience of man, yet work experience is included in a very few secondary schools.

Nothing could express more adequately than do these criticisms the reasons why the National Child Labor Committee undertook a study of work experience programs in secondary schools. The Committee has worked for 40 years to promote legislation which would prevent early employment and give children more education. But it has been obliged to face the fact that, as compulsory attendance to 16 became more of an actuality and less of a fiction through enactment of better laws, a large proportion of the children who were held in school longer were restless and dissatisfied, merely marking time, playing truant or making trouble generally until released from school by the long-awaited sixteenth birthday.

Laws alone, obviously, are not the answer—there must be school programs which will interest all the students instead of boring the

* This article presents some of the major findings from *Work Experience in Secondary Education: A Study of Part-Time School and Work Programs*, by Harold J. Dillon, published by the National Child Labor Committee, 1946.

majority, for the majority today, in contrast to the past, is composed of students who enter employment instead of college when they leave high school. In the absence of high school curricula adapted to their needs, many students who compose this majority receive little educational benefit from a longer period of required education and little stimulus to remain in high school to complete the full course.

The outstanding experiments in secondary education developed during the war years were the part-time school and work programs organized under school supervision and control in various cities throughout the country. The best of these programs were designed, not only for the immediate objectives of enabling students to assist in war production without leaving school and of bringing their part-time after-school work under control, but for the long-range objective of testing the educational values of work experience for students who obviously needed something different from the regular high school curriculum.

Educators had been talking and writing about the need for work experience programs in secondary education for some time but except for the strictly vocational work-study programs, no large-scale non-vocational experiments in part-time school and work had been made until wartime manpower needs provided the stimulus and the work outlets. Believing that these programs offered excellent laboratory material for study, the National Child Labor Committee undertook a survey of representative examples while the programs were still in full operation during the war. Information was sought on the educational aspects of school-work programs, the methods of organization and supervision which were used, and the opinion of schools, parents, students, employers and labor was obtained to provide community evaluation of the programs.

The cities studied—Philadelphia, Tulsa, Orange (Tex.), Los Angeles, Oakland, San Francisco, Sacramento, Detroit, Grosse Pointe (Mich.), Minneapolis and Torrington (Conn.)—were selected both because they were of different size and in different areas and because preliminary inquiries showed that they had the particular kind of programs the Committee wanted to study. The programs were those in which the students spent four hours in school and four hours at work in jobs which were approved by the school, with guidance and supervision provided by the school for those participating and usually with school credit granted for employment. No attempt was made to include in the study: (1) regularly established vocational programs of school and work; (2) pro-

grams where students were merely excused from school, prior to the regular closing time, to work on a job where no school supervision was provided; (3) summer work programs or unpaid work-experience projects.

The school systems included in the study gave full cooperation by making data available, helping to secure student, parent and employer opinion by sending out questionnaires, and evaluating their experience with work-study programs.

What does the study reveal as to the constructive values of work experience and its possibilities for contributing to the adjustment and development of the students whose needs are not met by the regular curriculum? These students are by no means limited to those with poor mental endowment as most schools are well aware, but include many who are entirely able to profit from further education and whose difficulties arise from a variety of causes, of which a low I.Q. is not one.

These values are outlined under three main headings in a chapter of the study in which the findings are summarized:

I. For Many Students a Combination of School and Work Has Definite Educational and Social Values.

The educational value of this type of work experience is not confined solely to actual skills acquired on the job but also includes the experience of accepting responsibility, of working with adults and, for some, of replacing a sense of failure with a sense of achievement and success. In many cases the school-work program provides the concrete situation in which the student can work out his social adjustment and prepares him to handle his problems more intelligently when he leaves school than does the usual school curriculum. Such programs offer a possibility of prolonging the period of education and, at the same time, of developing greater mental or social maturity where this is needed for the adjustment of the individual.

II. School-Work Programs May Provide More Appropriate Jobs for Students Working Outside of School Hours Than Students Find Independently.

When the schools assume responsibility for approving jobs, there is opportunity to establish better controls over types and conditions of work:

1. Care can be taken to place students in work that is suited to their individual needs.

2. Hours of work can be controlled and combined hours of school and work are usually shorter for students in the program than for students working independently outside of school hours.

3. Multiple jobs by students are reduced or eliminated.

4. Most programs operate no later than 7 p.m. thus eliminating night work.

5. Students who secure jobs independently often work illegally. School-work programs provide employment which meets legal requirements.

III. The Programs Tend to Interest Some Young People in Remaining Longer in School.

1. Students who would otherwise leave school because of lack of interest in the curriculum, poor adjustment due to a number of causes, or school failure, tend to remain longer in school when work experience is available. This is especially true for students in the lower grades of high school (the grades at which most drop-outs occur) who are more likely to remain in school if they can look forward to a part-time work program.

2. Instead of a taste of work encouraging students to leave school for full-time employment, the experience of part-time work leads many to recognize the need for further schooling.

3. Some young people who might otherwise leave school for financial reasons continue in school. While economic need should be met in other ways and should not become a criterion for participation in the program, the desire of young people to earn money is a factor in school withdrawal.

(4) The daily attendance of many students improves after transfer to the school-work program.

Many school people stated, with school records to support their statements, that school attendance had improved, and truancy had practically disappeared for a large majority of students in work programs. One principal reported that practically all the students who ordinarily "sat on the bench" in front of his office as attendance problems had made a satisfactory adjustment to the school-work program. Another principal said, "The youth are developing a sense of belonging. They are becoming more mature. In the school they faced nothing but failure. The school, alone, is not able to provide the type of experience they need." The following joint comments were made by a principal and a school counselor:

"In the work experience group in the——Junior High we are beginning to note some definite attainments as we look back upon our program of the past three months. Heading the list should be perhaps the development of habits of regular attendance among those who had fallen into habits of laxity and those who had been serious truants. We feel there are deep implications in this achievement

when we attempt to evaluate our organization. Each of the following points, too, commands fuller consideration, but our purpose at this time is to present a listing rather than a complete report:

1. A development of group loyalties; a feeling of belonging to and identification with a group with a purpose.

2. A growth in undertaking responsibilities for the welfare of the group.

3. A change in attitude toward co-workers in the classroom and in the working world.

4. An understanding of standards of work and conduct imposed by adults other than teachers.

5. An appreciation and understanding of the needs of others and their willingness to help. This was manifested concretely in their generous contributions to the social agencies.

6. A change in habits of personal cleanliness and dress.

7. A real awareness of the importance of tact and courtesy.

8. A display of initiative in purposeful and wholesome pursuits.

9. A development of poise and confidence not frequently seen among early adolescents."

Most responses by school principals to a questionnaire submitted to them were equally favorable, though some gave qualified approval or raised important questions as to the future of the programs, such as "We'd better do some more careful planning. Some of the types of work for which students are receiving credit bother me." "Let's do some real guidance and find out if work experience is the only answer."

The response of the students who were questioned about work experience was overwhelmingly favorable. In four cities, 1,999 students were asked, "If another student should ask your advice, would you advise him to go on the school-work program?" The responses showed that 80% would recommend the work program. The reasons most frequently given by the students were: "Work provides good experience; learn good work habits; encourages youth to stay in school; financial help from work; school seems more 'real'; helps gain a sense of security and independence; teaches responsibility; leads to permanent employment; provides good contacts with people; puts you 'on your own.'" The reasons given by the 20% who said they would not recommend work experience were: "Interest in school diminishes; lack of time for homework; lack of opportunity for participation in social activities; affects scholarship; affects health."

There was a definite correlation between these replies and those

which the students gave as to whether they thought the school-work program had adversely affected their scholarship or their health. Those who said they would recommend work experience were those who felt that neither their scholarship nor their health had been adversely affected while those who said they would not recommend work experience were the ones who felt there had been adverse effects on their scholarship or health.

Though scholarship is not as important a measuring rod of work experience as evidence of personality adjustment and development, student opinion on scholarship was checked with school records in several cities. These checks showed that in general improvement was greatest and regression least among the older students. No group showed any marked amount of regression except those who had been failing before they entered the work program but a striking fact about this group was that, although 46% regressed in scholarship, another 46% improved which was the highest per cent of improvement for any group with the single exception of the group rated as "superior" in scholarship.

Parents, as well as students, approved work-experience programs. In one city, the responses to a questionnaire showed that only 2.6% considered the school-work program unsatisfactory while the remainder considered it either "satisfactory" (73.7%) or "the best possible arrangement" (23.7%). Among the parents who had noticed a change of attitude, the percentage who stated that there had been improvement in desirable attitudes, such as school attendance, self-reliance, behavior at home, use of money, interest in family finances, was much larger than the percentage who reported undesirable reactions, such as complaints about being tired, loss of interest in social activities, or resentment of parental control.

Employer opinion, on the whole, was favorable, though the favorable reaction of this group was naturally colored to some degree by the wartime need for part-time student workers. However, many of them expressed interest in having the programs continue—in one city 202 out of 209 employers said they would hire students under the same plan the next year if it was in operation and a number of them made suggestions for program improvement such as the following:

1. Students should be trained to be more responsible. Mention was made especially of the need for: (a) notification of employers in case of absence; and (b) the ability to work without constant supervision.

2. Planning should be done immediately for continuing operation of the program.

3. The hours when students may work should be made more flexible.

4. Vocational counselors and placement interviewers should do a more careful job in selecting students for particular types of work.

5. Schools should stress business manners such as: correct business dress; personal cleanliness; how to address employers, fellow-workers and customers.

6. The importance of regularity of attendance and punctuality should be emphasized.

7. There should be closer coordination between employers and schools through more frequent visits by coordinators.

In general, labor representatives were concerned about two aspects of school-work programs. On the one hand, they feared that work programs might reduce opportunities for adult workers in times of unemployment and become a means of supplying a highly concentrated and easily available source of young workers which might tend to undercut wage standards. On the other hand, labor recognized that students who drop out of school are competing in the labor market for full-time employment, and there was a disposition to cooperate with education and management so that students would be encouraged to remain in school and, at most, be employed only on a part-time basis in a four-four or similar program under conditions controlled by the school. There was a genuine interest on the part of labor to have young people remain in school and complete their education.

More labor representation in group planning and operating the programs and more controls, such as the following, were suggested by representatives of organized labor:

1. Part-time work organization should not interfere with the apprentice system and students should not be referred to any establishment where a regularly established apprentice system is in operation.

2. Schools should refuse to place students in establishments where agreements between employer and school are not adhered to.

3. Students should not be referred to or permitted to remain in places of employment engaged in labor disputes.

4. Schools should make clear to youth that part-time employment is not a guarantee of full-time employment upon finishing school.

5. More teachers concerned with the program should have actual industrial or commercial experience.

6. The curriculum should include instruction in the organization and principles of labor unions.

Methods of organizing and implementing school-work programs used in the various schools included in the study are described and analyzed in considerable detail in the report. Administrative organization, selection and organization of students, placement procedures, student supervision and guidance, all require careful planning in terms of services, finances and personnel. Good work-experience programs are neither simple to organize nor inexpensive to maintain. They should be initiated on a modest scale and expanded as their effectiveness in enriching the experience of students becomes apparent and as money and personnel become available.

Initial organization should include the combined thinking of educators, employers, representatives of organized labor, health and other community agencies working in the interests of young people. Care should be taken to secure the cooperation and understanding of all of the above groups in the initiation of such programs and their continuing interest in the appraisal, operation and development of the programs.

Not all students will profit to an equal degree from participation in part-time work. While it may be agreed that some form of work experience is good for all young people of secondary school age, and that these programs have great potential value as a means of bringing together students not usually in contact with one another because of curriculum organization, it would not be practicable at the present time to provide part-time paid employment for all. The program should be considered, both for those who may wish to elect it and those for whom it may be recommended, but it is essential that the individuals selected for participation should be those students who will receive the greatest individual value.

If the students are in need of experiences other than those provided by the usual curriculum, scientific methods must be used to determine what those experiences should be. Only where schools have the services of medical clinics, school psychologists and guidance personnel can this problem be handled effectively. While this is true of all students, it is especially true of students in the younger age group. Merely assigning "problem" cases to the work program is no solution of individual needs, nor is there justification for using work experience to remove "undesirable" students from the regular curriculum. The study revealed enough evidence, showing progress in educational and emotional adjustment by students under 16 on work programs, to indicate that work experience can provide one means for meeting the needs of some students under 16 at a critical point in their development. The progress

noted in the study, however, was the result, in every case, of effective guidance and continuous follow-up.

Since it is necessary that work experience be correlated with individual needs and interests, the following procedures are suggested in selecting students:

1. Consideration of the reason for the individual's interest in work experience, or his need for it, as a factor in his educational and social adjustment.

2. Thorough health examinations.

3. Examination of cumulative record of the student. This should include scores from tests indicating natural aptitudes; interest inventories; personality ratings; scholastic averages and other pertinent data.

4. Conferences with the student, his parents, teacher and counselor.

5. An appraisal of total data to determine if the student's needs and interests can best be met through participation in a work experience. This requires a balancing of possible gains from this type of program as against losses that might be suffered through curtailment of other activities; consideration of the type of jobs available; and consideration of other experiences available through the school that might be equally adequate.

Careful selection of students for work experience must be supplemented by placement and supervisory services in the hands of specially trained and qualified personnel. A desirable schedule of school and work must take into consideration, for each individual, such factors as age; data from health examination; travel time between school, home and work; time required for necessary homework; and time for social activities. Although there are no objective data to indicate that the four-four program involves strain, and although students and parents questioned did not feel that it was unduly difficult, nevertheless it is evident that it is more exacting than the usual school program and is undertaken at an especially critical period in the individual's development. Follow-up health examinations should, therefore, be required every six months, or oftener if, in the opinion of teacher, counselor, supervisor, or employer, the need is indicated.

Fundamental to the whole question of the educational value of work-experience programs is the attention that is given to the integration of the school curriculum and the job. Some of the points that need to be considered in this connection are the following:

1. Discussion of problems encountered on the job and informa-

tion pertinent to work experience should be given a place in the curriculum. Instruction is recommended in such areas as: applying for the job; employer-employee relationship; labor organization; taxes and banking; protective labor standards. Where it is not possible to convene working students for individual and group counseling and for instruction related to work, effort should be made to provide for discussion of these problems in regular classes.

2. If possible, the curriculum should be so scheduled that work-experience students interested in extra-curricular activities have some opportunity to participate. Consideration might be given to the possibility of organizing the work schedule so that the student could have one full day a week in school. If neither of these arrangements is feasible, the student's interest in the activities which will have to be dropped should be weighed against the gains expected from participation in work experience.

3. Effort should be made to schedule required courses so that time will be available for work experience.

4. Guidance and counseling services should be expanded substantially to make sure that the individual student benefits to the fullest extent possible from the work-experience program. This may require additional personnel, in-service training for counselors, or both. It may also call for an expansion of testing facilities by the school. It is essential that an adequate amount of counselor time be provided for work-experience students.

5. When work-study programs are organized in the schools, work experience should be given recognition in the curriculum as an integral part of the education of the individual student.

Continuance or extension of work-study programs must inevitably depend on the economic conditions prevailing at any given time. Students must not be provided with part-time paid employment at the expense of primary wage earners. Wage scales must be maintained and, in periods of unemployment, work experience of a different type may have to be substituted, such as unpaid participation in school or community projects which do not compete with private industry. Part-time employment in school-work programs, however, can be a factor in keeping out of the full-time labor market some students who would otherwise drop out of school as soon as they reach the end of the compulsory school attendance age.

The evidence obtained in this study of work-experience pro-

grams organized during the war years suggests: (1) that such programs, if they are to be continued, will need careful evaluation and the adoption of definite procedures and safeguards that could not always be provided in the many rapidly developed, and often large-scale, programs that were set up under wartime pressures; and (2) that such programs, though they should not be regarded as the solution of all the problems in secondary education, may become one of the many resources that will be developed to provide educational experience for secondary school students sufficiently meaningful to increase the holding power of the schools, so that more students will be better prepared for their future lives as workers and citizens.

The Shock Method of Teaching

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LEARNING is generally regarded in the light of pleasant experience. High school and college educators alike scale their subject matter in gradual steps that will lead the unwitting and perhaps unsuspecting pupil down paths previously agreed upon. It often includes social as well as subject matter goals. Modern methods attempt to ease any strain upon the nervous system of the learner. Appeal is made to the cold logic of the intellect instead of the vicissitudinous heart.

Yet a careful inquiry into the history of ideas and their impact upon society tells a different story. A new idea, if it is worth its salt, packs a good deal of emotional punch. Think of how the theories of Darwin whipped intellectual circles of late 19th Century Europe into a frenzy. The lectures of Huxley and Spencer spread beyond the classrooms of Oxford to set all of England agog.

Ideas are things to become excited about. Chances are that the student who can't get worked up over what he is studying will gain little from the course. Subject matter is often arranged under the naïve assumption that the student holds no fixed opinions on the subject he is electing. This is not true. Whether from the barbershop or the family dinner table, the student carries with him a miscellany of opinions on labor, war, the British Empire, marriage, race relations, etc. Though subject matter be unfolded in a beautiful mosaic of irrefutable facts, it may not budge him from a fixed position.

A course in biology, for instance, may take the student on a logical and sequential tour of organic matter beginning with the one-celled animal and working up to the erect anthropoid called man. Yet the fascinating facts of evolution may not strike a single spark in the imagination though the student may leave the course with an A. After a painstaking study of the laws of inheritance, he may still repeat the hush-hush story of a black baby born of a union between a member of the white and Negro races.

The dramatics of biology, or any other subject bearing on current problems, must be hurled at the student at high velocity to shake him loose from popular misconceptions. It may be argued

that this is quibbling. Won't he put aside the false idols as the course progresses and as the facts are unearthed?

Human beings possess the strange knack of being able to absorb thoughts and facts which are utterly indigestible. Overworking our biology example it is perfectly possible for an excellent student of that subject to entertain outlandish opinions on the subject of racial purity. Course material can be superimposed like a shin plaster on a rather primitive frame of conceptions and beliefs. Schooling may actually consist in pasting on these patches in innumerable quantity without reaching the core of the individual.

That is why education must have its destructive side as well. Ideas and opinions have the manner of so firmly implanting themselves at an early age that it may take an atomic explosion to pry them loose. Some would sooner part with their wives than with their ideas. Attack the fixed opinions of a person and he may construe it as a personal attack. That is why education minus an emotional upheaval is really no education at all. Jar the student out of his fenced-in world and he may do a little cerebration.

Possibly the one thing that started the writer off on the road to critical thinking was a verbal trouncing received at the hands of a high school teacher of economics. He began the course with a list of statements which we were to determine if true or false. One stated that any man who wanted a job could get one. This was back in 1927 when we boys were planning to be bond salesmen and stock market manipulators. I believe most of us pegged this one as easy. Of course anyone who wanted a job could get one. Had we not sniffed over long lists of vocations that were for our taking?

The unkind negation of the teacher and the subsequent blast at my corner grocery store axioms of economics stung me bitterly. It hit at my ego and I was fighting mad. I was ready to study economics—if only to prove that the teacher was wrong. It was then that I learned of technological unemployment and submarginal labor.

I believe that it was a masterful stroke of good pedagogy for the teacher to blast me out of my all too convenient belief. Had I learned the data in passing—as just another bundle of information to be wrapped up in a neat package—I would have left the course none the wiser for the exposure.

That is the dynamics of teaching. Minus this element teachers are of little consequence in intellectual development. Better to send the students into the library everyday for several hours of

reading. Teachers who assign reams of unvitalized material could be profitably supplanted by transcriptions of Orson Wells reciting the same material in finer rhetoric.

The study of subject matter should begin by examining the hottest, most controversial issues in the field. Students who are jolted the hardest may well be the ones who will profit most from the course. A teacher does not always have to take sides, but it is better in many cases if he does. If the purpose of intellectual development is to make the student think analytically (this is not the sole purpose of education, by any means!), he must be provided with an initial push. The teacher can sometimes bring this about with dogmatism. The two-sides-to-every-question teacher is singularly uninspiring.

When interest has been aroused and discussion is raging, the class may then be ready for an examination of the facts. Without an inquiry into the facts, any class discussion is in danger of degenerating into a "bull session" with the throatiest students holding the floor and the discussion wandering aimlessly over the face of the globe. Students often learn in spite of themselves. When they look for evidence to prove a notion, they will inevitably run into new evidence. And a diligent perusal of the facts will temper judgment.

Unless an idea or thought can be made to ring an emotional bell, the supporting data will have little meaning. Facts must have an emotional clothestree on which to hang. Otherwise they will be forgotten entirely or persist in tattered fragments. High school and college students are notorious in their failure to do serious reading after their departure from the halls of learning. For all their years of formal training, these have never been intimately touched. True they absorbed enough data to have a diploma thrust into their hands on commencement day, but since their studies were devoid of meaning, serious literature became something of a drudge, and they were glad to part company at the first opportunity.

Emotionalizing the curriculum does not force the teacher into the role of debunker à la Henry Mencken. Some debunking may be needed, but the teacher ought not to revel in the sport of icon-smashing. He must build faith in his subject and supply color and romance as well. In the lives of the students, an emotional chord must be struck. Like the artist, only the teacher can give life to the canvas.

We have been careful not to upset the pupil. Perhaps his

world should be turned upside down momentarily for a fresh view. I have known college students to read and study great thinkers like John Dewey, Thorstein Veblen and George Santayana—with an apparant absorption of data since they passed their examinations —but without quickening a single pulse or lifting a solitary horizon.

It's not enough to assign material and see that it is learned. We in the educational world must penetrate to the nucleus of behavior. There are many ways to do this—other than to slash the way through. In some instances, this may be harmful. For others, it is the only thing. Certainly it is a method of presentation which has been generally overlooked or neglected.

Integrating Students' Thinking

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ONE OF the dominant problems of modern education is the problem of integration: What it is and what to do about it. Various articles have appeared from time to time discussing its merit or describing changes in the curricula of the progressive schools which are attempting to solve the problem. Often teachers feel that the public schools can do nothing toward achieving integration. This misconception may have arisen because of the tendency of the literature on the subject to force an association between the term integration and a radical departure from traditional programs of studies. Since an abrupt change in the type of curricular offerings of the public schools is out of the question, many teachers have abandoned the hope of realizing the aim of integration, retaining only wishful thinking about it.

THE PROBLEM OF THINKING

Integration is part and parcel of another problem which is also in the mind's eye of the educator; namely, that of thinking. Modern education is tremendously interested in thinking. Leading educators see the free play of intelligence as a factor of highest importance in meeting the problems of our society.

But young people do not think as much as they should. We see evidence of this every day. Some blame for inept thinking must be accepted by the school. Pupils are not taught to think. One reason for this may be that pupils are not led to see the potentialities and practical utility in thinking for themselves, and consequently do not sense the necessity for cultivating this habit. Another reason is probably that something intervenes to hamper and limit the complete release of intelligence. Assuming the latter to be true, this article sets forth one of these limiting factors; namely, the lack of integration in a person's thinking, and to suggest a possible means of overcoming this.

Before thinking can take place, there has to be something with which to think. This is an evident truism, but its implications are not so apparent. If we limit our discussion to normal individuals, then the "something to think with" becomes resources. These

resources may be facts, ideas, assumptions, opinions, or beliefs. They may, moreover, be true or false.

UNDERSTANDING THE SOCIAL HERITAGE

In order to accumulate resources which are as true and accurate as possible, we attempt to give our pupils an understanding of the social heritage so that the past experiences become future tools. We attempt to develop in them the ability to find and collect information, the disposition to evaluate it, the ability to organize it, and the ability to present it effectively. We hope that these more specific aims are realized and become functional in the pupil's life for, if the resources are faulty, no matter of skillful manipulation can produce a scientific outcome. But, if, as the data of thought are collected, they are tucked away nicely in an isolated compartment, it becomes that much harder to reassemble them, remove the chill of unfamiliarity by introducing one to the other, and to whip them into creative thinking. In this sense a well-stocked mind is not necessarily an agile mind, for it may not be so easy to select individual items from separate stockrooms; especially if there are no connecting doors. The potentialities are there, but they do not seem to pay for their keep, for the effective resources may be only a part of the total reservoir.

It is the confusion that results from compartmentalizing subject matter, the walling off and isolating of fields of ideas, that causes a person to act in terms of only one area without allowing the ideas of any other area to modify his actions. How much transfer do you find from the logical thinking in geometry to logical thinking in social studies? To what extent is the child's behavior at home changed by virtue of his direct exposure to a course in hygiene? In fact, it is the efficacy with which we are able to compartmentalize our pupils that prevents their being able to bring to bear on all their life situations the knowledge, skills, habits, and attitudes from all the pertinent fields of their experience.

A REMEDY

It is now time to consider a remedy for this. Let us pass the question of whether pupils can gather data and give primary attention to the breaking down of the isolated compartments to which these are relegated.

The desire to break down compartmentalization must entail a departure from old methods of teaching. One departure is in terms of the conflicts which heretofore have remained implicit in pupils' thinking. These can be made explicit through the careful

direction of the teacher. The study of science can be shown to have originated partly from a dissatisfaction with the metaphysical explanations of natural phenomena. The Copernican system was evolved in contrast to the doctrine held by the church that the earth was the center of the universe. The rise of water in an exhausted tube might be explained by saying, "Nature abhors a vacuum," or by the action of atmospheric pressure. There would doubtless arise within the class further examples which might be explained on the basis of natural laws upon hypotheses which have their roots in the supernatural.

In a similar way there is generally a conflict between collectivism and rugged individualism which not only becomes apparent in the different opinions of the various members of the class, but also can be brought to light in the thinking of one particular individual. Pupils, for example, are collectivists in feeling to a certain extent their brother's keepers, but they also hold dear the ideal of "every man for himself" which is fostered by this competitive society of ours. Many ideals and values that are held can be shown by careful developmental teaching to be mutually contradictory, the one in part canceling out the other.

PLANNING THE ACTIVITIES

The teacher enters the picture in planning the activities which will bring these conflicts to the foreground. Sharp focus can be made on the inherent conflicts in believing and doing. Much thinking along this line can be stimulated by inquiries. Has science been an aid or a hindrance to social progress? Is science making for increased unemployment? Will too much knowledge make man increasingly unhappy? The final conclusions reached in these cases would differ, and who is to say which is correct?

In these cases the teacher's responsibility is to see that pupils are consistent in their thinking, that facts are correct, that the implications of the student's beliefs are brought to light, and that he vision the consequences of his beliefs and be willing to accept them. There are no right answers in this kind of thinking. Pupils must act in terms of the consequences. When they disagree among themselves as to the answer, the teacher can use this very fact to point out these are controversial issues, that both sides have used intelligence and yet have arrived at opposite conclusions. This fact should serve to illustrate that all facts are not in and consequently conclusions should be only tentative, subject to continual revision as new evidence comes to light. Unless action is to be paralyzed, however, each must act on the basis of his own conclusions.

Neither the school nor the teacher fulfills its obligations if it becomes a "settler" of issues on the basis of its own beliefs. The teacher should not impose his ideas; he should not settle these issues for the pupils; he should only call attention to neglected aspects, implications, and consequences, and thereby aid the student in collecting information pertinent to the problem, evaluating it, and facing the problem in an open-minded manner. It is conceivable that the pupil, after thoughtful consideration on the basis of all the data that are available, may take the same stand as the teacher or it is equally conceivable that he may take a different one. In fact a measure of the teacher's worth in this connection is the extent to which pupils do not fully agree with his ideas, for on questions of value there are no "right" answers, only tentative answers open to modification as more evidence appears. The final settling of issues, then, is distinctly within the province of the individual—a social right guaranteed by a democratic society.

HUMAN BEINGS ARE NOT MACHINES

One or two words of warning ought to be given. Human beings are not cold, calculating, logical machines. Thinking is not entirely intellectual; the whole organism reacts in the process. Emotions enter the picture and condition the result. The reconstruction of beliefs, therefore, involves emotional as well as intellectual adjustment. Bringing forcefully before a student in biology the conflict between science as exemplified in the theory of evolution and established religious beliefs can very conceivably knock the props from under a youngster and involve a disintegration which would indeed be harmful. Teachers should recognize the pupils' need and desire for security which they might feel to be shattered by the recognition of such a conflict. Merely making the conflict evident and leaving pupils in a state of anxiety and confusion will never do, for it is fraught with the hazard just mentioned. The teacher who does make conflicts apparent must also accept the responsibility for aiding the student to harmonize them. While this does not mean supplying the solution, it does mean advice, suggestion, guidance, concern, and definite constructive help on the part of the teacher.

A second danger is that the teacher, in her zeal to ferret out inconsistencies in pupils' thinking, may not adjust these to the comprehension level of the child. Such would result in pupils being in a state of bewilderment, overwhelmed with the size of the difficulty the solution of which is beyond their range of experiences. The teacher will do well to bear in mind the important principle that

success in one problem establishes a self-confidence which makes for repeated successes in other more difficult ones. This and a study of the stage of maturation of the group will serve as criteria for selection of the particular problems to be raised in the classroom.

APPLIES TO ANY SUBJECT

Bringing to light pupils' conflicts lends itself to any subject that is taught in the public school if only the teacher realizes its importance and desirability and has a disposition which spills over into action. It will produce a new emphasis and orientation, to be sure, but it is sufficiently flexible to be worked into the daily program so gradually that the pupils themselves are not aware of the change. It does not require specialized training, and would be most effective in the hands of a teacher who, herself, is sensitive to the basic issues of life and is on the road to integration in her own thinking.

Fundamentally, all that integration means is that a person settles all the conflicts in his thinking as they arise in terms of a broad and emergent philosophy which is itself more or less changed in the process. With conflicts removed, the person becomes more and more consistent in what he says and does, confusion is reduced and compartmentalization broken down. Information then attains its real logical organization, for there are no parts reserved for private use by some independent pattern of thought. As such, knowledge is truly effective and offers the maximum utility as the raw material of the thinking process, the potentialities of which are exemplified by our present stage of civilization and by conjectures as to what it might have been had man's intelligence been released sooner.

How Much Industrial Arts for the High School Student Who Plans to Attend College?

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"HOW MUCH shop can I take if I hope to be able to go to college when I complete my high school course?" This is a problem that has probably confronted many boys and the advisors who have been helping them make their high school schedules in the past two decades. Judging by the study herein presented, the answer could usually be, "As many units of shop work as in any other subject field." As the American system of formal education enters the post-war world, the industrial and vocational subjects can, seemingly, march in rank with the academic studies.

On the basis of this study of 150 colleges and universities in the area of the Mississippi Valley Manual Arts Conference, made in the early part of 1946, the high school graduate with three units of industrial arts courses is eligible, insofar as his subject pattern, to enter 94.5% of the colleges which furnished data for this survey. The boy with four units is eligible to enter 82.5% of the colleges; the boy with two units in this subject field could enter 98.5% of the colleges. Even a student who had taken more than five units in industrial subjects could enter 43.5% of the schools studied. As four units would be a normal and perhaps desirable maximum in any one subject field, the author has based his premise chiefly on the condition which prevails for the graduate with four or fewer units.

With the colleges and universities of our country preparing for much larger enrollments during the coming years, and the secondary system likely to face a similar increase due to decreasing employment opportunities for teen-age youth, it is felt that the findings presented here may be of timely interest and sound value to those serving in secondary school guidance. The study indicates that the entering high school student can plan his schedule to include three or four units in the industrial arts without fear of being barred from college by that condition, unless he has already chosen one of the small number of colleges which do not accept that many.

Some say there is no problem here. Periodic surveys of college entrance requirements have shown that acceptability of high school work in shop and drawing courses has greatly increased in the past decade or two, and surely all good administrators keep up-to-date on such information and would advise the entering high school student of the current condition. However, as is often the case in our educational system, there seems to be a gap between principle and practice. From the author's knowledge and observation, the general feeling among industrial arts teachers is that they do not get many boys in their classes who plan to enter college because it is thought that they cannot earn the required units for college matriculation if they spend high school time in the shop or drawing room.

The few available articles on this point support the author's opinion. The following paragraph is from a study made by Brown and Proctor[1] published in 1928:

> "In only six institutions out of the total 331 included in the study were there more than 15% of the transcripts offered for entrance containing five or more non-academic units. Nineteen institutions that would accept five or more non-academic credits for entrance had no transcript offered for entrance where the applicant desired to take advantage of their generosity. Another group . . . 45 in number, that would accept five units of vocational-commercial-industrial credit had an approximate median of 3% of the transcripts offered them containing as much of the credit as they allowed."

A study of 237 high schools in Texas, made by Miss Bollman[2] in 1941, revealed that 77 of the high school principals who answered her questionnaire would add more vocational subjects if the colleges required no particular subjects for entrance. It seems that the problem does exist, and it is hoped that the results of this study may contribute to the application of scientific procedure in educational guidance.

The meagerness of available research on the point raised in the preceding paragraph indicates a need for current and thorough study of the policies of educators toward recommending industrial arts courses as a part of the college preparatory student's program. Apparently no study of this problem has been made, and the author feels that such data would be of definite value to the directors of educational guidance.

The position of industrial arts courses for college entrance credit has greatly increased in stature since the early years of the

[1] Brown, E. J. and Proctor, W. M., "Methods of Admission and Matriculation in 331 Colleges and Universities," *Seventh Yearbook of Department of Superintendence*, National Education Association, 1928.

[2] Bollman, Thelma A., "Relation of College-Entrance Requirements and the Secondary-School Curriculum," *School Review*, Vol. 50, 286-93, April, 1942.

present century. The average maximum amount of 4.7 units of shop courses accepted in 1946 (on the basis of this survey) is a considerable gain from the condition indicated by the Committee on College Entrance Requirements of the National Education Association[3] in 1899. Their report shows a definite trend away from the classic subjects at that time. English courses were even hinted of as being worthy of equal footing with the foreign languages. In the conclusion, the Committee even estimated that in the future commercial subjects might have to be considered for college entrance. At this period, even the natural science courses had only lately been considered for college entrance.

The "future" did not tarry long. Henderson,[4] in a study of admission to college by certificate, presented the data shown in Figure 1.

FIG. 1

DATE OF FIRST ACCEPTANCE OF DRAWING AND MANUAL TRAINING COURSES BY EIGHT STATE UNIVERSITIES

University	*Accepted Drawing*	*Accepted Manuual Training*
Michigan	1872	1904
Minnesota	1876	1901
Missouri	1889	1905
Illinois	1896	1899
Iowa	1879	
Ohio	1907	1907
Texas	1904	1904
Wisconsin	1904	1904

The Carnegie Foundation for the Advancement of Teaching[5] reported in 1921 that on the average only one-half unit of "free electives" was accepted for college entrance. In 1920 the average had risen to one and one-half units. And so the advance continued, aided by the arguments of the secondary school educators and necessitated by the steady addition of the vocational and commercial courses to the high school curriculum. In general, the results of this study would verify McKown's[6] observation that "the whole trend of college entrance requirements is toward a more liberal academic requirement and a more strict personal requirement."

[3] National Education Association, "Report of Committee on College Entrance Requirements," Chicago, University of Chicago Press, 1899.

[4] Henderson, Joseph L., *Admission to College by Certificate*, Teachers College, Columbia University, New York City, 1912.

[5] The Carnegie Foundation for the Advancement of Teaching, 16th Annual Report, 1921, pp. 73-81, College Entrance Requirements.

[6] McKown, Harry C., *The Trend of College Entrance Requirements*, 1913-1922, Washington, Government Printing Office, 1925.

College Entrance Prospects for the High School Graduate with Certain Amounts of Credit in Industrial Arts Subjects

The graphical analysis shown in Figure 2 presents the situation which confronts the student who has graduated from an approved high school with two or more units in industrial arts courses. Unless the student has taken more than four units in this subject field, it will be seen that only a small percentage of the colleges would be closed to him because of his choice of high school subjects. Even

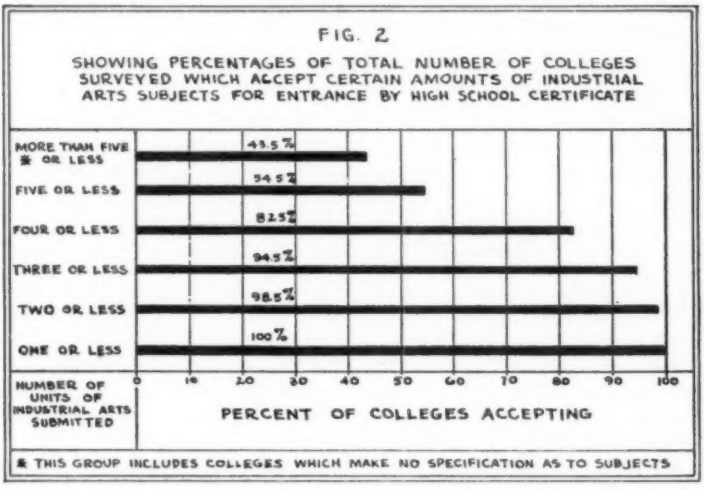


FIG. 2
SHOWING PERCENTAGES OF TOTAL NUMBER OF COLLEGES SURVEYED WHICH ACCEPT CERTAIN AMOUNTS OF INDUSTRIAL ARTS SUBJECTS FOR ENTRANCE BY HIGH SCHOOL CERTIFICATE
MORE THAN FIVE * OR LESS
43.5%
FIVE OR LESS
54.5%
FOUR OR LESS
82.5%
THREE OR LESS
94.5%
TWO OR LESS
98.5%
ONE OR LESS
100%
0 10 20 30 40 50 60 70 80 90 100
NUMBER OF UNITS OF INDUSTRIAL ARTS SUBMITTED
PERCENT OF COLLEGES ACCEPTING
* THIS GROUP INCLUDES COLLEGES WHICH MAKE NO SPECIFICATION AS TO SUBJECTS

for a student with five units, more than half of the colleges surveyed would be open. Boys who had carried more than five units of such work would not be barred from almost half of the colleges because of their preparatory subject pattern.

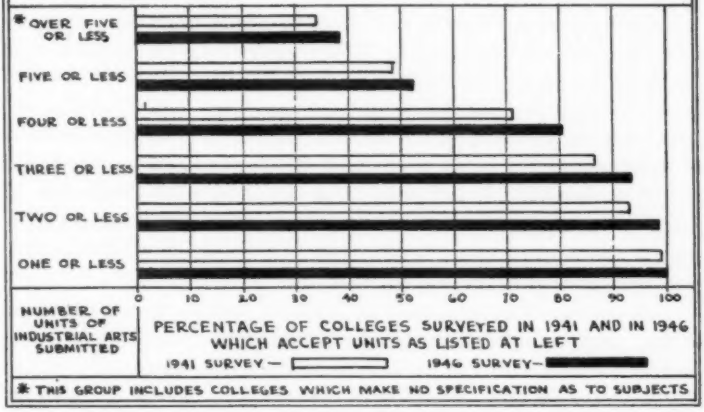
As noted later, the distribution is such that the student with a high proportion of vocation courses would not be largely restricted to one type of college. His opportunity for entrance to a teachers' college would be somewhat greater, but the other types of schools are by no means entirely restricted to the student with academic preparation.

It should be noted that more than half of the group accepting over five units consists of colleges which specify no particular subjects in the high school pattern. It is emphasized that these colleges are placing all importance in the factor of scholarship. Many such schools require certain standards of high school scholarship on the part of the candidate. This emphasis on scholastic ability is also found with many of the colleges that have more rigid specifications

of subjects for entrance. Thus, the results of this study should not be interpreted as meaning that the boy with lower scholastic achievement can carry a large proportion of the relatively easier shop courses in high school and still be eligible for college entrance. It would appear, however, that there should be little hesitation on the part of the superior student to carry as many courses in industrial subjects as his interests dictate, unless he has limited his choice of college to some one school whose entrance requirements are less liberal than the average institution of higher education.

FIG. 3

COMPARISON OF RESULTS OF SURVEYS MADE IN 1941 AND IN 1946



TRENDS AS INDICATED BY THIS SURVEY

As data were collected for this survey first in 1941, then again in 1946, the author has been able to compare the two sets of facts to detect the trend occurring during the five-year period. As shown in Figure 3, there has been a slight gain in the percentage of colleges accepting certain amounts of industrial arts units in 1946 over the 1941 percentage. The average gain for all of the six groups is about 5%. The greatest gain was in the group of colleges accepting four or less units. In 1941, 71% of the colleges belonged in that group; in 1946 the group contained 80.5% of the colleges. The author feels that a period of five years is perhaps too short to be of much value in determining any over-all trends. However, the percentages indicate that the increase in the number of industrial units accepted which has occurred at a rapid rate in the past two decades did not cease during the war period. It might be

reasonable to expect that there would have been little or no change during the war years, but apparently this was not entirely true.

The comparison charted in Figure 3 is compiled on the basis of only the 131 colleges which were surveyed both in 1941 and 1946. The mean (average) maximum number of units accepted by these colleges (excepting those with no subject requirements) in 1941 was 4.0 units. In 1946 this average maximum had risen to 4.7 units.

More significance may be seen in the trend in evidence when the results of this survey are compared with those made by earlier investigators in this field. Holmes,[7] in an article written in 1907, reports that a survey of the entrance requirements of colleges representing all parts of the country except the South revealed that only three of the 20 surveyed would accept manual training courses as free electives. Bryan,[8] writing in the same yearbook, reports that investigation of the catalogs of 26 state universities of the central, northern and western states, and 26 endowed colleges from the same area, shows that only 11 of the 52 institutions mention manual training among the subjects accepted for entrance. By 1912, a Committee on Entrance Requirements for the Society for Promotion of Engineering Education[9] was requesting that their Association should recommend to the colleges that two units of manual training courses be accepted for entrance.

The earliest extensive and well-defined article on the trend of college entrance requirements was McKown's[10] study for the Office of Education in 1922. This included a detailed examination of the requirements of 314 liberal arts schools, 273 of which specified what subjects they accepted. In 1913 about 36% would accept drawing courses and about 27% accepted shop work. In 1922, 77% would accept drawing and 60% would accept shop courses, a gain of more than 100% in each case during the nine-year period covered by the survey. The report indicates that, in 1922, the average maximum amount of manual training courses accepted was two and one-half to three units.

Linton[11] reported that a survey made in 1926 showed approxi-

[7] Holmes, Henry W., "Education Versus College Entrance Requirements," in Part I, Sixth Yearbook of the National Society for the Scientific Study of Education, Chicago, 1907.

[8] Bryan, W. J. S., "College Entrance Credits for Vocational Subjects," in Part I, Sixth Yearbook of the National Society for the Scientific Study of Education, Chicago, 1907.

[9] "Report on Entrance Requirements and Definition of Subjects Presented by the Committee on Entrance Requirements," Proceedings of the Society for Promotion of Engineering Education, Vol. 19, 1912.

[10] *Ibid.*

[11] Linton, Clarence, *A Study of Some Problems Arising in the Admission of Students as Candidates for Professional Degrees in Education;* New York City, Teachers College, Columbia University, 1927.

mately 30% of the 222 colleges and universities studied accepting from one to four units in industrial arts. Only three institutions required that students present one unit or less in this field. The study by Brown and Proctor[12] in 1928 reported that about 27% of the 331 schools surveyed would accept five or more units of vocational work. Kurani's[13] study of 253 colleges, made in 1931, revealed that the mean number of "free electives" accepted was two and one-half units. In 1936, Dr. Warner[14] had an article on the status of the amount of industrial arts accepted by the colleges in several states. On the basis of his study, the average maximum number of units allowed was about four.

The preceding paragraphs trace the steady rise in stature of courses in the industrial arts. At the early part of the century, in most cases, no shop work or drawing courses were accepted for college matriculation. As we approach the middle of the century, the average condition seems to be to allow almost five units in this field. The trend indicated by this survey, for the relatively short interim it covers, seems to be in agreement with this long-range progression.

COMPARISON OF THE THREE TYPES OF COLLEGES SURVEYED

The graph shown in Figure 4 illustrates the differences in the percentages of each type of college which accepts certain numbers of units of industrial arts courses for entrance. As the graph shows, there is a marked difference between the different categories only in the groups of colleges accepting four or more units. The teachers colleges appear to have the more liberal policy—92% of the teachers colleges accept four or fewer units, while the liberal arts colleges at this level comprise 80% of those surveyed, and 76% of the engineering colleges will accept this number of units. In the groups above the four-unit maximum, there is a wider difference; 74% of the teachers colleges accept five or fewer units of shop and drawing courses, while the liberal arts and engineering schools drop to 46% and 44% respectively at this level, and 60% of the teachers colleges will accept students with more than five units in industrial arts, with only 34% of the liberal arts and 36% of the engineering colleges having such regulations.

In the group of colleges accepting less than four units, there is little difference between the standards of the several types of schools. All of the colleges accept at least one unit; all of the

[12] *Ibid.*
[13] Kurani, Habib A., *Selecting the College Student in America;* New York City, Teachers College, Columbia University, 1931.
[14] Warner, William E., "College-Entrance Credit for Industrial Arts," *Industrial Education Magazine,* Vol. 38, p. 142, May, 1936.

teachers colleges accept two units or less. Even the student with three units of shop work could enter more than 90% of the colleges in each category, providing he met the other requirements.

Thus, it seems that the prospective college student who has taken three units or less in the industrial arts field will find almost equal opportunity for entrance to any of the three types of colleges. If he has four units he will have a little wider opportunity in the teachers college field. With five or more units, he can still meet the requirements of a good majority of the teachers colleges, but his choice will be sharply restricted for colleges in the other two categories.

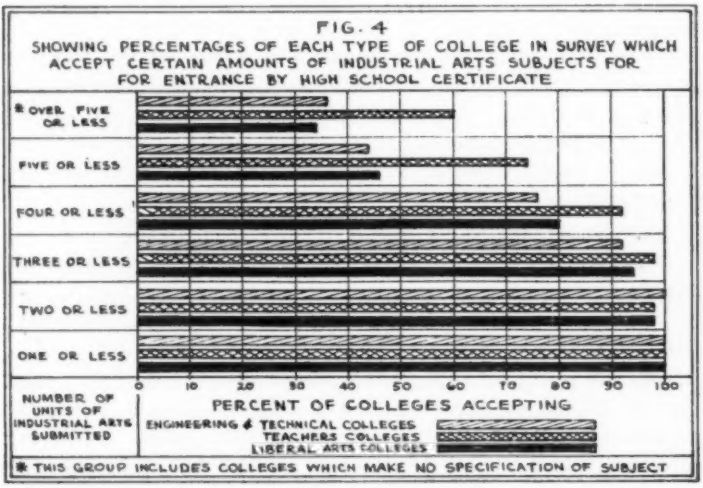


FIG. 4
SHOWING PERCENTAGES OF EACH TYPE OF COLLEGE IN SURVEY WHICH ACCEPT CERTAIN AMOUNTS OF INDUSTRIAL ARTS SUBJECTS FOR FOR ENTRANCE BY HIGH SCHOOL CERTIFICATE
* OVER FIVE OR LESS
FIVE OR LESS
FOUR OR LESS
THREE OR LESS
TWO OR LESS
ONE OR LESS
0 10 20 30 40 50 60 70 80 90 100
NUMBER OF UNITS OF INDUSTRIAL ARTS SUBMITTED
PERCENT OF COLLEGES ACCEPTING
ENGINEERING & TECHNICAL COLLEGES
TEACHERS COLLEGES
LIBERAL ARTS COLLEGES
* THIS GROUP INCLUDES COLLEGES WHICH MAKE NO SPECIFICATION OF SUBJECT

It might be noted that the larger percentages of teachers colleges accepting four or more units of industrial arts is due to the fact that 23 of the colleges in this group, almost half of those surveyed, have no particular subject requirements and accept on certificate all graduates of approved high schools who meet the scholarship standards and other qualifying conditions which may be set up by the college. As has been mentioned before, in the case of such colleges, the maximum number of industrial arts units accepted is determined by the maximum number of such units which the various high schools allow for graduation.

On the basis of those colleges which specify the maximum number of units which could be accepted from the industrial arts subjects (including those schools which accept industrial arts

courses as free electives), the mean (average) maximum number of units accepted by the colleges in each category is as follows:

Engineering and Technical Colleges—5.1 units.
Teachers Colleges—5.07 units.
Liberal Arts Colleges—4.3 units

COMPARISON OF THE COLLEGES IN THE VARIOUS STATES SURVEYED

Inspection of the graph shown in Figure 5 shows a wide range of difference in percentages of colleges accepting four or more units of industrial arts according to the states in which they are located. In the lower levels there is more uniformity, since all of the colleges in most of the states accept at least three units. The colleges accepting less than three units are mainly in Texas and Ohio, with a few in Michigan and Tennessee.

In general, the colleges in Iowa, Kansas, Indiana and Illinois appear to be most liberal in their policy toward accepting shop work for entrance. The schools in Texas, Ohio, Tennessee, Louisiana and Michigan seem to be more restrictive.

A separate survey was recently conducted by the author to determine the requirements and policies of each state in the country with respect to the amount of industrial arts courses they allow for graduation from the standard high schools in their state. By comparison with the results of this survey, there appears to be little correlation between the maximum units in industrial arts allowed by the state for graduation and the acceptance policies of the colleges in the state. In Indiana and Kansas, for example, the high school graduates are limited to four and four and one-half units respectively. In both these states 70% of the colleges surveyed will accept more than five units of shop or drawing courses. In Illinois, the maximum normally allowed is six units, and for Iowa high schools no maximum amount is specified. On the other hand, Texas high schools accept five and one-half units in industrial arts for graduation and only 13% of the colleges in Texas will accept more than four units for entrance. In Tennessee the maximum specified by the state is ten units and only 36% of the Tennessee colleges surveyed will accept more than four units. Ohio and Louisiana high schools allow only four units so that the students in those states would not be greatly restricted by the entrance requirements of the colleges in their states.

The mean (average) maximum number of units accepted by the colleges, classified according to location is as follows:

Illinois—5.1	Iowa—7.1
Indiana—4.2	Kansas—6.0

Kentucky—5.7	Ohio—4.4
Louisiana—4.3	Tennessee—4.0
Michigan—4.3	Texas—3.7
Minnesota—4.4	Wisconsin—4.8
Missouri—4.9	

ATTITUDE OF COLLEGES

Only a few of the colleges surveyed made any definite recommendations that industrial arts credits be presented for college entrance. Of the 150 schools, six recommended that industrial subjects be presented. One school recommended one unit; four recommended two units; and the other school recommended three units. About 20% (31) of the colleges surveyed recommended that no units of shop and drawing courses be presented for college entrance. A somewhat larger number of schools made recommendations as to the maximum number of units which should be presented for entrance; 16 colleges, about 10% of those surveyed, gave such advice. The average maximum recommended was 3.7 units.

The author feels that the percentage of schools making recommendations was so small that no general conclusion can be made in this respect. The general tone of the letters received indicated that, while the entrance officials are quite willing to accept industrial arts subjects as electives, they do not feel that courses from a non-academic field should be recommended for college preparation. The following comments taken from the letters received in reply to the questionnaire may give some idea of the current attitude of the admission officers in the various colleges studied:

"As you will note, we do not require any specified distribution or concentration of units. . . . College is interested primarily in the quality of the work that has been done in the secondary school."

"We have no prejudice against any subjects, but we are concerned that the students we admit here should have the necessary prerequisites for the liberal arts courses that we require."

"We welcome industrial arts subjects when completed in a good high school and if these units do not encroach too far on the so called liberal arts subjects."

"However we do believe that a certain amount of training with the hands and material like they deal with in industrial arts is of high value, and being a graduate of manual training school myself, I feel that those units of industrial arts should be very welcome to college entrance."

". . . if the student were not in the upper half of his class, a review of his record in high school would be made, and it is my judgment that it would not be desirable for all of his elective units to be in the industrial arts program. However, they definitely should be included in any broad preparation for the college field."

"As a general rule, however, I am of the opinion that not more than one-

fourth or one-fifth of the student's high school work might be in industrial arts and that the remainder could be rather well distributed among those areas that we have most generally accepted to be the unifying elements among all of our citizens. I am not arguing here for the traditional courses in many of these fields, but I hope that our high schools will insist that all students have courses dealing with man's social life, the physical features of the world and certain courses in the realm of ideals."

"We are trying to encourage attendance of students who rank in the upper half of the graduating classes, and try to discourage attendance of those with poor scholarship. No specific pattern of high school subjects is required."

"We have not actually recommended any, but we gladly accept one or two."

"... but frequently we have recommended that students include art, music, and home economics in their high school training, since we consider all these subjects valuable."

"We recommend that students have one or two units in industrial arts for college entrance but do not insist on that because of the lack of departments in our state."

"More and more I come to feel that colleges ought to refrain from any sort of direction or supervision of high school curricula, and that this policy should be reflected in college admission requirements."

PROCEDURE IN MAKING SURVEY

For the benefit of those readers who may be interested in knowing something of the procedure followed in conducting this study, the following remarks are included. The survey was first organized and data collected in the summer of 1941. The war and attendant duties postponed an analysis and summarization of the early data and the author returned to the task in 1946. New data were acquired at this time and the study completed.

The information was gathered partly from the catalogs or bulletins of the colleges studied, and in part from the answers to a form letter sent to the entrance officials of each college involved. This letter requested a copy of the latest catalog and asked several specific questions about pertinent information not expected to be found in the catalog.

About 80% of the colleges contacted responded to the first letter sent. A second letter resulted in answers from all the colleges and sufficient data from the desired number of samples. In most cases the study was based on information from both the catalog and the reply to the questionnaire, but in some cases only one of the two sources was available.

The institutions which served as samples for this survey were originally selected from those listed in *The 1939 College Blue Book* and *American Universities and Colleges,* published in 1940. When the second survey was made in 1946, the list of samples was revised, using the *1944-45 Educational Directory* of the U. S. Office of Edu-

cation. The colleges were selected so as to give a cross-section of all the colleges in the area covered in the survey. The number chosen from each state was proportionate to the total number of institutions of that type in the state. An attempt was made to select samples which would be representative of the various types of colleges according to such considerations as (1) organization or governmental unit supporting the school, (2) sex of the students accepted, (3) race of the students accepted, etc. When several schools representing the same factors existed, the ones with the larger enrollments were chosen.

When sufficient catalogs and replies to the questionnaire had been assembled, the pertinent data were interpreted and tabulated on three large charts, one for each of the three categories of schools. When these tables were completed, the information was summarized and analyzed and the graphs shown in Figures 2, 3, 4, and 5 were prepared.

The reference material for supplemental reading was taken from available sources in the library. The *Education Index, Reader's Guide* and the card catalog in the library were thoroughly combed for pertinent material and all available writing on this subject was perused.

CONCLUSION

The author's general conclusions are: In 1946, the boy entering high school and planning to take up to four units of industrial arts will find almost as many colleges open to him as to the graduate with a strictly academic schedule. This premise is based on the condition which exists for the boy with four units or less of the shop or drawing courses. It was noted that college entrance is becoming increasingly dependent on scholarship and similar factors, and the results of this study should not be interpreted as showing that the boy with lower mental ability can carry a large proportion of the easier shop courses and still be eligible for college entrance.

Book Reviews

Tiffin, Joseph, Knight, F. B. and Asher, Eston Jackson. *The Psychology of Normal People*, Pp. XVI 581, D. C. Heath and Company, 1946.

The Psychology of Normal People differs from the usual introductory book in general psychology in having a distinctive emphasis on the application of psychology to everyday living. This flair for application may be illustrated both in its chapter headings and in the extended treatment within the chapter. In the first instance, we have as chapter headings: "Differences Between People," "Differences in Environment," "Abilities, Aptitudes and Interests," and "Attention: How We Direct Our Energies." In the second instance, in the chapter relating to differences in environment the home rightly receives the lion's share of discussion. There are, for example, two pictures of contrasting home interiors one of which gives every evidence of wealth; the other, every evidence of poverty. Into this discussion of the home are introduced factors which are influential in producing problem children: the attitudes of parents, friction between parents, discipline, and the size of the family. In this same chapter the influences of the school, of motion pictures, of the radio, of community life and of other factors on the growing individual also appear.

It is because of just such discussions as these that *The Psychology of Normal People* has an interest for the readers of this journal. Because of the emphasis upon everyday life and its selection of illustrations therefrom this book cannot have the logical consistency of those texts that rarely step outside the laboratory for facts and illustrations. It does, however, circumscribe all statements of application with proper hedges of reliability. For these reasons, this book is recommended to students of education as being clear, readable, and applicable to many of the problems with which they are or will be in daily contact.

A. M. JORDAN.

FRENCH BOOKS RECEIVED

Nouveau Cours Practique de Français Pour Commençants, E. B. de Sauzé. John C. Winston Company, Philadelphia, 1946. 261 pp.

Transition to Reading and Writing French. Elton Hocking and Joseph M. Carrière. Rinehart & Co., Inc., New York. 1940. 183 pp. + xliii.

Chez les Français. A. Badel, Edited by Thomas R. Palfrey and William C. Holbrook. Rinehart & Co., Inc., 1937. 157 pp. + lxxxiii. (Seventh Printing, 1946.)

French in Review. Gifford Davis and Neal Dow. Henry Holt & Co., New York, 1940. 172 pp. + xlix.

French Review Grammar. Malcolm K. Hooke and Meta H. Miller. Henry Holt & Co. 1945. 262 pp. + xliii.

Conversational French for Beginners. Julian Harris and André Lévèque. Henry Holt & Co. 1946. 438 pp. + lxiii.

Louis Bastide. Jules Romain, Edited by Jules Vial. Henry Holt & Co. 1946. Text, 132 pp. Exercises, pp. 133-135. Vocabularies, lxii pp.

La Deuxième Étape en langue française. M. S. Pargment. Henry Holt & Co. 1940. 416 pp. Introduction to French Pronunciation and Grammatical Appendix, p. 421-p. 486. General Vocabularies xli.

La Barbe ou les Cheveux. Joseph Maury. Adapted and Edited by J. Douglas Haygood and Otto F. Bond. D. C. Heath & Co., Boston, 1944. 39 pp. + Exercises, p. 40-p. 44. Vocabulary, p. 45-p. 54.

Cosette et Marius Episode des *Miserables* de Victor Hugo. Retold and edited by Paul L. Girault and John A. Floyd. D. C. Heath & Co. 1945. 39 pp. Exercises, p. 40-p. 45. Vocabulary p. 46-p. 56.

L'Armée Moderne. Charles A. Micaud. D. C. Heath & Co. 1944. 108 pp. + Vocabulary, p. 109-p. 142.

La France en Amérique. James B. Tharp and Ethel Lavelle. Henry Holt & Co. 1944. 120 pp. + Vocabulary 107 pp.

Second Year French. Kathryn L. O'Brien and Marie Stella LaFrance. Ginn and Co. Boston. 1940. 523 pp.

SPANISH BOOKS RECEIVED

Blanca Nieves y Compañía, by Teresa de la Parra, Edited with Introduction, Notes, Exercises and Vocabulary. Carlos García-Prada. D. C. Heath & Co. 1946. 234 pp.

La Alfombra Mágica. Conversation and Composition based on a Novelette on Mexico by A. Hamilton Gibbs. Samuel M. Waxman. D. C. Heath & Co. 1945. 148 pp.

Introducción a la Civilización Hispanamericana. Richard Pattee. Heath. 1945. 304 pp.

Cuentecitos Retold and Adapted from the Spanish of Vicente Riva Palacio. Luis Leal. Heath. 58 pp.

Lector Hispanoamericano. Arturo Torres-Ríoseco and Luis Monguió. Heath. 1944. 158 pp.

Lindas Terras de México. Salomay Lauderdale Harrison. Heath. 1944. 278 pp.

HUGO GIDUZ